

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Cancelled).
2. (Previously Presented) A method according to claim 40, wherein the spray of droplets exits said nozzle from said fluid port and is squirted against the dirty surface downstream of the nozzle.
3. (Previously Presented) A method according to claim 40, wherein the fluid port leads to a second chamber and wherein the spray of droplets is squirted against the dirty surface downstream of the second chamber.
4. (Previously Presented) A method according to 40, wherein the air pressure is at least 1 bar.
5. (Previously Presented) A method according to claim 4, wherein the air pressure can be regulated.
6. (Previously Presented) A method according to claim 40, wherein pressurized water having a water pressure is supplied to said upstream portion of the nozzle device.
7. (Previously Presented) A method according to claim 6, wherein the water pressure can be regulated.
8. (Cancelled).
9. (Previously Presented) A method according to claim 40, wherein the air pressure and the water pressure are set to a ratio ranging between 2 : 1 and 1 : 2, respectively.

10. (Previously Presented) A method according to claim 40, wherein the water is squirted against the surface in a spray of droplets, from a distance which is smaller than a distance at which the water becomes turbulent downstream of the nozzle due to lack of impetus.

11. (Previously Presented) A method for cleaning according to claim 40, wherein the surface to be cleaned is a surface of flower bulbs, flower tubers or perennial plants and wherein a range of water pressure and a range of air pressure measured as an overpressure relative to the water pressure are selected from the following groups (i) to (v):

- (i) water pressure from 0.5 to 1.5 bar and air pressure from 8 to 8.5 bar;
- (ii) water pressure from 1.5 to 3 bar and air pressure from 7.5 to 8 bar;
- (iii) water pressure from 2.8 to 4.2 bar and air pressure from 5.5 to 6 bar;
- (iv) water pressure from 4 to 6.2 bar and air pressure from 5 to 5.5 bar; and
- (v) water pressure from 6 to 10 bar and air pressure from 3.5 to 6.5 bar.

12. (Previously Presented) A method for cleaning according to claim 40, wherein the surface to be cleaned is a surface of soft fruit, and wherein a range of water pressure and a range of air pressure measured as an overpressure relative to the water pressure are selected from the following groups (i) to (ii):

- (i) water pressure from 0 to 0.5 bar and air pressure from 1.5 to 2.5 bar; and
- (ii) water pressure from 0.5 to 1.5 and air pressure from 1.5 to 2.5 bar.

13. (Previously Presented) A method for cleaning according to claim 40, wherein the surface to be cleaned is a surface of medium hard crops, and wherein a range of water pressure and a range of air pressure measured as an overpressure relative to the water pressure are selected from the following groups (i) to (iii):

- (i) water pressure from 2.8 to 4.2 bar and air pressure from 6.5 to 9.5 bar;
- (ii) water pressure from 4 to 6.2 bar and air pressure from 6.5 to 9.5 bar; and
- (iii) water pressure from 6 to 10 bar and air pressure from 6.5 to 9.5 bar.

14. (Previously Presented) A method for cleaning according to claim 40, wherein the surface to be cleaned is a surface of hard crops, and wherein a range of water pressure and a range of air pressure measured as an overpressure relative to the water pressure are selected from the following groups (i) to (iii):

- (i) water pressure from 2.8 to 4.2 bar and air pressure from 9.5 to 20 bar;
- (ii) water pressure from 4 to 6.2 bar and air pressure from 9.5 to 20 bar; and
- (iii) water pressure from 6 to 10 bar and air pressure from 9.5 to 20 bar.

15. (Previously Presented) A method for cleaning according to claim 40, wherein the surface to be cleaned is sugar beets, beetroots or potatoes, or the products stemming therefrom, potato chips, pulp and cattle fodder products and wherein the water pressure is between 6 and 10 bar and the air pressure has an overpressure of 4.0 to 20 bar relative to said water pressure.

16. (Previously Presented) A method for cleaning according to claim 40, wherein the surface to be cleaned is a surface of roads, and wherein the water pressure is between 6 and 10 bar and the air pressure has an overpressure of 7 to 20 bar relative to said water pressure.

17. (Previously Presented) A method for cleaning according to claim 40, wherein the surface to be cleaned is vehicles, passenger cars in a car wash; or trains, buses or lorries in special washing facilities, and wherein the water pressure is between 0.5 and 1.5 bar and the air pressure has an overpressure of 2.5 to 6 bar relative to said water pressure.

18. (Previously Presented) A method for cleaning according to claim 40, wherein the surface to be cleaned is a surface of crockery, cutlery in a dishwasher, or machines or tools in an industrial washing-up machine, and wherein the water pressure is between 0.5 and 1.5 bar and the air pressure has an overpressure of 4.5 to 8 bar relative to said water pressure.

19. (Previously Presented) A method for cleaning according to claim 40, wherein the surface to be cleaned is a surface of persons, and wherein a range of water pressure and a range of air pressure measured as an overpressure, relative to the water pressure are selected from the following groups (i) to (iii):

- (i) water pressure from 0.5 to 1.5 bar and air pressure from 1.5 to 5; and
- (ii) water pressure from 1.5 to 3 bar and air pressure from 1.5 to 5.

20. (Previously Presented) A method for cleaning according to claim 40, wherein the surface to be cleaned is hard surfaces, and wherein the water pressure is between 6 and 10 bar and the air pressure has an overpressure of 9.5 to 20 bar relative to said water pressure.

21. (Previously Presented) A method for cleaning according to claim 40, wherein the surface to be cleaned is soft surfaces and wherein a range of water pressure and a range of air pressure measured as an overpressure relative to the water pressure are selected from the following groups (i) to (iii):

- (i) water pressure from 2.8 to 4.2 bar and air pressure from 6.5 to 9.5 bar;
- (ii) water pressure from 4 to 6.2 bar and air pressure from 6.5 to 9.5 bar; and
- (iii) water pressure from 6 to 10 bar and air pressure from 6.5 to 9.5 bar.

22-39. (Cancelled).

40. (Previously Presented) A method for cleaning a dirty surface by squirting water in a spray of droplets against the dirty surface to be cleaned comprising the steps of:

mixing water and air under pressure in a nozzle device having coaxial bores, said nozzle having an upstream portion where the water and air under pressure are mixed to obtain a pressure for said mixture higher than the pressure outside the nozzle device;

passing said pressurized mixture of air and water to a downstream fluid port portion of said nozzle device which is narrower than said upstream portion;

squirting said spray against the dirty surface to be cleaned; and
cleaning the dirty surface with said spray.

41. (Previously Presented) The method for cleaning according to claim 40, wherein an end wall of said upstream portion makes a right angle with respect to a side wall of said narrower downstream fluid port portion.

42. (Previously Presented) The method for cleaning according to claim 41, wherein the water is squirted against the surface in a spray of droplets, from a distance which is smaller than a distance at which the water becomes turbulent downstream of the nozzle.

43. (Currently Amended) The method for cleaning according to claim 40, further comprising attaching a rotating member to the nozzle device and rotating the rotating member to manipulate ~~[[the]]~~ a direction of the spray.

44. (Previously Presented) The method for cleaning according to claim 43, further comprising flowing the mixture through the rotating member, wherein the rotating member is coupled to the downstream fluid port.

45. (Currently Amended) The method for cleaning according to claim 44, further comprising impacting ~~one or more~~ a plurality of blades coupled to the rotating member with the mixture thereby rotating the rotating member, wherein the blades extend radially outward from a central axis of the rotating member.

46. (Previously Presented) The method for cleaning according to claim 45, further comprising resisting wear between the rotating member and the nozzle with a wear-resistant part proximate the downstream fluid port.

Please add the following new claims:

47. (New) The method of claim 40, further comprising flowing the water and air into the nozzle device through a nozzle housing having a central water bore and a plurality of air bores located around the central water bore.

48. (New) The method of claim 47, wherein the coaxial bores are formed by a terminal end of the central water bore and the upstream portion.

49. (New) A method for cleaning a dirty surface by squirting water in a spray of droplets against the dirty surface to be cleaned comprising the steps of:

flowing a liquid through a central bore of a nozzle housing;

flowing a gas through a plurality of gas channels formed in the nozzle housing radially around the central bore;

mixing the liquid with the gas in a mixing chamber, wherein the mixing chamber has coaxial bore portion formed by a terminal end of the central bore and an upstream portion of a nozzle;

forming a mixture of the gas and liquid having a pressure higher than the pressure outside of the nozzle;

flowing the mixture through an exit orifice of the nozzle, wherein the exit orifice has a diameter smaller than the diameter of the upstream portion;

squirting the mixture against the dirty surface; and

cleaning the dirty surface.

50. (New) The method for cleaning according to claim 49, further comprising attaching a rotating member to the nozzle and rotating the rotating member to manipulate a direction of the mixture engaging the dirty surface.

51. (New) The method for cleaning according to claim 50, further comprising flowing the mixture through the rotating member, wherein the rotating member is coupled to a holder coupled to the nozzle.

52. (New) The method for cleaning according to claim 51, further comprising impacting one or more blades coupled to the rotating member with the mixture thereby rotating the rotating member, wherein the blades extend radially outward from a central axis of the rotating member.